

plurality of temperature sensor electrical conductors which are each electrically  
D1 connected to an individual temperature sensor at a distal end of the temperature  
sensor electrical conductor].

12. (Amended) The device of claim 11 [wherein] having the electrode  
D2 electrical conductors [are] at least in part helically braided into the core member  
jacket.

13. (Twice Amended) The device of claim 12 [including] having the  
D3 electrode electrical conductors at least in part helically braided into the shaft.

18. (Four Times Amended) An electrophysiology device assembly,  
comprising:

- a) a guiding member having an elongated shaft having a proximal end,  
a distal end, a port in the proximal end, a port in a distal shaft  
section, and a lumen extending therein; and
- b) an electrophysiology device slidably disposed in the lumen of the  
D4 guiding member, comprising:

an elongated shaft having a proximal end, a distal end, and a  
distal shaft section, and a plurality of electrical conductors helically  
braided into the shaft;

a plurality of tubular coil electrodes on an exterior portion of  
the distal shaft section electrically connected to the electrical

conductors, having an interelectrode spacing of about 1 mm to not greater than 3 mm;

D4

a plurality of temperature sensors on an exterior portion of the distal shaft section, being positioned so that at least one temperature sensor is disposed between two adjacent electrodes, each temperature sensor being electrically connected to at least one of the electrical conductors helically braided into the shaft; and

a plurality of metal [band] bands on the shaft, so that a metal band is adjacent to and radially disposed about an outer surface of [the] each temperature sensor and the shaft.

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20. (Four Times Amended) A method for treating a patient, comprising:
- a) providing an electrophysiology device, comprising:

an elongated shaft having a proximal end, a distal end, and a distal shaft section, and a plurality of electrical conductors helically braided into the shaft;

D5

a plurality of tubular coil electrodes on an exterior portion of the distal shaft section electrically connected to the electrical conductors, having an interelectrode spacing of about 1 mm to not greater than 3 mm; and

a plurality of temperature sensors on an exterior portion of the distal shaft section, being positioned so that at least one temperature

sensor is disposed between two adjacent electrodes, each temperature sensor being electrically connected to at least one of the electrical conductors helically braided into the shaft; and

a plurality of metal [band] bands on the shaft, so that a metal band is adjacent to and radially disposed about an outer surface of [the] each temperature sensor and the shaft;

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- b) introducing the device into the patient's vasculature and advancing the device until the distal section of the device is disposed within a chamber of the patient's heart;
  - c) placing at least one electrode on the device distal shaft section in contact with a desired surface of the heart chamber; and
  - d) delivering high frequency electrical energy to the at least one electrode on the device and measuring the temperature at a temperature sensor adjacent the electrode.
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23. (Three Times Amended) An electrophysiology device for use within a patient's heart, comprising:

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- a) an elongated shaft having proximal and distal ends; and
  - b) a distal shaft section including a plurality of longitudinally disposed tubular coil electrodes on an exterior portion thereof, the electrodes having a maximum outer diameter of about 1 mm to about 1.22 mm and a length of about 2 mm to about 8 mm and an interelectrode

D6  
spacing of about 1 mm to not greater than 3 mm, at least one temperature sensor disposed on an exterior portion of the distal shaft section between two adjacent electrodes, and a plurality of individually insulated electrical conductors at least partially embedded and helically disposed within a wall of the elongated shaft each electrode and the at least one temperature sensor being electrically connected to at least one electrical conductor.

Please add new claim 40.

D7  
3540. An electrophysiology device, comprising:

- a) an elongated shaft having a proximal end, a distal end, and a distal shaft section;
- b) a plurality of tubular coil electrodes on an exterior portion of the distal shaft section, having an interelectrode spacing of about 1 mm to not greater than 3 mm;
- c) at least one temperature sensor on an exterior portion of the distal shaft section, being positioned so that the temperature sensor is disposed between two adjacent electrodes;
- d) a conducting member disposed about an outer surface of the temperature sensor; and

e) one or more electrical conductors electrically connected to the  
D 7 at least one temperature sensor, at least partially embedded and helically  
disposed within a wall of the elongated shaft.

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